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Abbreviations:

EPA- Environmental Protection Agency
FAO- Food and Agriculture Organization
GMO- Genetically modified organism
ILSI- International Life Sciences Institute
IFBC- International Food Biotechnology Consortium
IgE- Immunoglobin E
IL-4 – Interleukin 4
IL-5 – Interleukin 5
Th_2- Helper T-cell 2
WHO- World Health Organization

Outline of manuscript section headers

Abstract

Evaluating the allergenic potential of GM foods

Overview of allergic reactions to foods

Strategies to determine if a modified food is allergenic

Decision tree approaches

Questions in risk assessment

References

Abstract

There is growing concern among the general public and the scientific community regarding the potential toxicity of genetically modified organisms. The use of biotechnology to enhance pest resistance or nutritional value has raised a number of fundamental questions including the consequences of insertion of reporter genes, the spread of resistance genes to surrounding plants and the use of suicide genes to prohibit reuse of seed from engineered plants. Of particular interest is the ability of proteins from genetically modified organisms to elicit potentially harmful immunologic responses, including allergic hypersensitivity. The lack of information of the potential toxicity of these products suggests a need to identify the critical issues and research needs regarding these materials and to develop testing strategies to examine the allergenicity of these compounds.